

## N-type i-TOPCon Ultra

BIFACIAL DUAL GLASS MONOCRYSTALLINE MODULE

TSM-NEG21C.20 715-740W

**740W** / MAXIMUM POWER OUTPUT

**23.8%** / MAXIMUM EFFICIENCY



### High customer value

- Standardized module size with flagship module power, 35W higher compared with conventional technology
- Low voltage design with higher string power, effectively reducing BOS (Balance of System) and LCOE (Levelized Cost of Energy) by 2%~6%
- Higher container space utilization effectively reduces the freight cost
- Certified Low-Carbon Footprint
- The Star of LCOE



### High power up to 740W

- Up to 23.8% module efficiency, on 210 innovation platform
- Patented i-TOPCon technology with continuous efficiency improvement, including contact resistance reduction, rear reflection enhancement and edge quality repairment



### High reliability

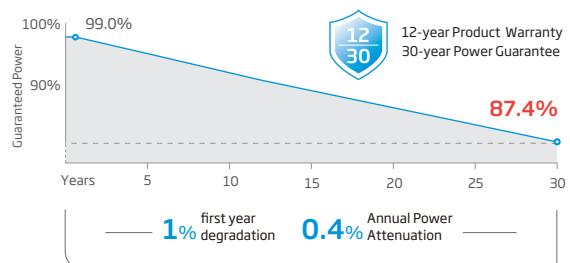
- Minimized micro-cracks with innovative non-destructive cutting technology and high-density packaging
- Reduced risks of hot-spot with half-cut technology
- Certified high resistance against salt, ammonia, sand, PID, LID, LeTID
- Sustainable in harsh environments and extreme weather conditions



### High energy yield

- Excellent low irradiation performance, validated by 3rd party
- Lower temperature coefficient (-0.29%/°C)
- Higher bifaciality, with up to 10%~20% additional power gain from back side depending on albedo
- Reliable dual-glass structure with 30-year power guarantee

### Performance Warranty



\* Please refer to product warranty for details

### Comprehensive Products and System Certificates

IEC61215/IEC61730/IEC61701/IEC62716  
 ISO 9001: Quality Management System  
 ISO 14001: Environmental Management System  
 ISO14064: Greenhouse Gases Emissions Verification  
 ISO45001: Occupational Health and Safety Management System  
 ISO14067: Product Carbon Footprint Limited Assurance



### ELECTRICAL DATA (STC & NOCT & BNPI)

Testing Condition	STC	NOCT	BNPI	STC	NOCT	BNPI	STC	NOCT	BNPI	STC	NOCT	BNPI	STC	NOCT	BNPI
Peak Power Watts-PMAX(Wp)*	715	547	792	720	551	798	725	555	801	730	559	809	735	563	814
Power Selection (W)**	0 ~ +5														
Maximum Power Voltage-VMPP (V)	41.10	38.70	41.10	41.30	38.80	41.30	41.50	39.00	41.50	41.70	39.30	41.70	41.90	39.50	41.90
Maximum Power Current-IMPP (A)	17.40	14.14	19.28	17.44	14.19	19.32	17.47	14.23	19.36	17.51	14.24	19.40	17.55	14.25	19.45
Open Circuit Voltage-Voc (V)	49.20	46.70	49.20	49.40	46.90	49.40	49.60	47.10	49.60	49.90	47.20	49.90	50.10	47.50	50.10
Short Circuit Current-Isc (A)	18.44	14.86	20.43	18.49	14.90	20.49	18.54	14.94	20.54	18.58	14.98	20.59	18.62	15.01	20.63
Module Efficiency $\eta$ m (%)	23.0		23.2		23.3		23.5		23.7		23.8				

STC: Irradiance 1000W/m<sup>2</sup>, Cell Temperature 25°C, Air Mass AM1.5. NOCT: Irradiance at 800W/m<sup>2</sup>, Ambient Temperature 20°C, Wind Speed 1m/s. BNPI: Irradiance: front 1000W/m<sup>2</sup>, rear 135W/m<sup>2</sup>, Temperature 25°C, Air Mass AM1.5

\*Measuring tolerance: ±3%. \*\*Power selection up to: +3%.

### Electrical characteristics with different power bin (reference to 5% & 10% backside power gain)

Backside Power Gain	5%	10%	5%	10%	5%	10%	5%	10%	5%	10%
Peak Power Watts-PMAX(Wp)	751	787	756	792	761	798	767	803	772	809
Maximum Power Voltage-VMPP (V)	41.10	41.10	41.30	41.30	41.50	41.50	41.70	41.70	41.90	41.90
Maximum Power Current-IMPP (A)	18.27	19.14	18.31	19.18	18.34	19.22	18.39	19.26	18.43	19.31
Open Circuit Voltage-Voc (V)	49.20	49.20	49.40	49.40	49.60	49.60	49.90	49.90	50.10	50.10
Short Circuit Current-Isc (A)	19.36	20.28	19.41	20.34	19.47	20.39	19.51	20.44	19.55	20.48

Power Bifaciality: 80±5%.

### TEMPERATURE RATINGS

NOCT (Nominal Operating Cell Temperature) 43°C (±2°C)

Temperature Coefficient of Pmax - 0.29% /°C

Temperature Coefficient of Voc - 0.24% /°C

Temperature Coefficient of Isc 0.04% /°C

Due to different testing methods, the actual performances might differ from the declared specifications.

### APPLICATION CONDITIONS

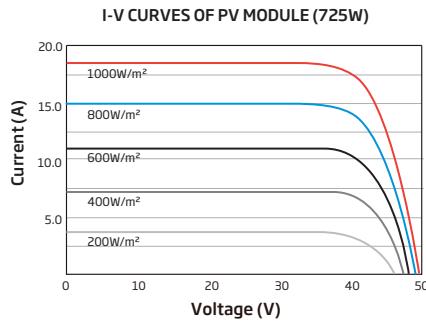
Operating Temperature -40~+70°C

Maximum System Voltage 1500V DC (IEC)

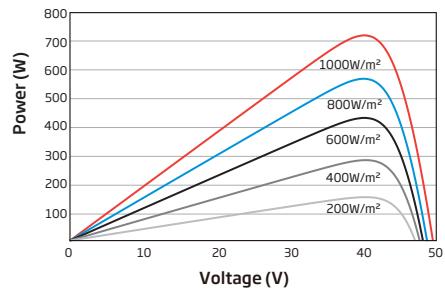
1500V DC (UL)

Max Series Fuse Rating 35A

### CURVES OF PV MODULE



P-V CURVES OF PV MODULE (725W)



### MECHANICAL DATA

Solar Cells N-type i-TOPCon Monocrystalline

No. of cells 132 cells

Module Dimensions 2384×1303×33 mm (93.86×51.30×1.30 inches)

Weight 38.3 kg (84.4 lb)

Front Glass 2.0 mm (0.08 inches), AR Coating Heat Strengthened Glass

Back Glass 2.0 mm (0.08 inches), Heat Strengthened Glass

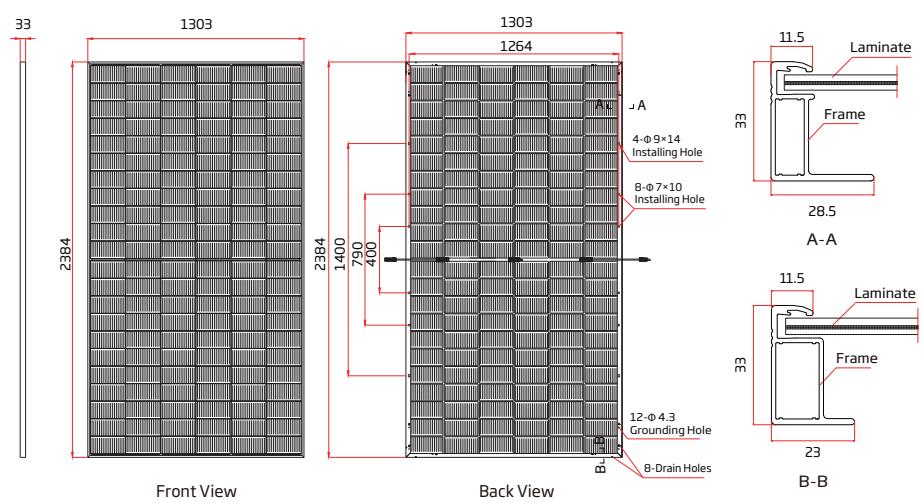
Frame 33mm(1.30 inches) Anodized Aluminium Alloy

J-Box IP 68 rated

Cables Photovoltaic Technology Cable 4.0mm<sup>2</sup> (0.06 inches<sup>2</sup>)  
Portrait: 370/230 mm(14.57/9.06 inches)  
Length can be customized

Connector TS4 / TS4 Plus

Packaging Modules per box: 33 pieces  
Modules per 40' container: 594 pieces



CAUTION: READ SAFETY AND INSTALLATION INSTRUCTIONS BEFORE USING THE PRODUCT.  
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